Abstract ID : 835

Title : Fatty acid profiles indicate ecological differentiation between breeding populations of grey seals Halichoerus grypus in the Baltic Sea.

Category : Conservation

Student : Not Applicable

Preferred Format : Either Oral or Poster Presentation

Abstract : The rising grey seal numbers in the Baltic Sea has led to increased conflicts with fisheries activities. Management measures such as culling have been implemented, despite very limited data on population structure and foraging distribution. To investigate the ecological differentiation of Baltic grey seals, we examined blubber fatty acid signatures from two distinct breeding colonies, and compared this to fatty acid signatures from two colonies along the East coast of the UK. High proportions of C18 polyunsaturated fatty acids, (n-9) monounsaturated FAs, and high ratios of (n-3)/(n-6) distinguished samples from the Baltic (brackish) from those from the North Sea (marine), although values were still slightly lower than those found in purely freshwater organisms. Within the Baltic, Estonian samples had a more marine trophic influence while samples from the Bay of Bothnia had a distinct freshwater trophic influence. We suggest that Baltic grey seals consist of at least two ecologically distinct groups, and argue that this distinction should be taken into account in management strategies for this population.